

WHAT IS CLAIMED IS:

5 1. Computer-executable process steps to  
provide an application programming interface (API),  
the application programming interface providing a  
common interface between an application program and  
plural different types of color measuring devices  
each having at least one color measuring sensor, the  
computer-executable process steps comprising plural  
10 functions for operating any of the plural different  
types of color measuring devices, wherein in order  
to complete an operation performed by at least one  
of the plural functions, the function that performs  
the operation must be called a number of times which  
15 is different for at least two different types of  
color measuring devices, and wherein for a color  
measuring device that is being operated, the API  
provides the application program with flow control  
data of the number of times that the function must  
20 be called.

2. Computer-executable process steps  
according to Claim 1, wherein the flow control data  
is provided by the function which must be called the  
25 number of times in order to complete the operation.

3. Computer-executable process steps  
according to Claim 2, wherein the flow control data  
is provided in the form of a call-again value.  
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4. Computer-executable process steps  
according to Claim 2, wherein the flow control data  
is provided in the form of a numerical value.

35 5. Computer-executable process steps  
according to Claim 1, wherein the flow control data  
is provided by a separate function other than the

6. Computer-executable process steps according to Claim 1, wherein functions in the API provide the application program with display values which are different for at least two different types of color measuring devices, the display values for display to a user so as to instruct the user in manipulating the color measuring device that is being operated.

20 a calibrate-position function to calibrate  
a relative position of a recording medium with  
respect to any of the plural different types of  
color measuring devices;

25           a move-to-patch function to relatively  
position any of the color measuring sensors and a  
color patch for any of the plural different types of  
color measuring devices, the move-to-patch function  
being provided with a logical color patch number by  
the application program; and

a make-measurement function to make a color measurement of the patch at which any of the color measuring sensors is relatively positioned, the make-measurement function providing the application program with a color measurement value for the color patch.

8. Computer-executable process steps to provide an application programming interface (API), the API providing a common interface between an application program and plural different types of color measuring devices each having at least one color measuring sensor, the computer-executable process steps comprising plural functions for operating any of the plural different types of color measuring devices, the plural functions comprising:

a calibrate-position function to calibrate a relative position of a recording medium with respect to any of the plural different types of color measuring devices;

a calibrate-sensor function to calibrate any of the color measuring sensors of any of the plural different types of color measuring devices;

a move-to-patch function to relatively position any of the color measuring sensors and a color patch for any of the plural different types of color measuring devices, the move-to-patch function being provided with a logical color patch number by the application program; and

a make-measurement function to make a color measurement of the patch at which any of the color measuring sensors is relatively positioned, the make-measurement function providing the application program with a color measurement value for the color patch;

wherein in order to complete an operation performed by at least one of the plural functions, the function that performs the operation must be called a number of times which is different for at least two different types of color measuring devices, and wherein for a color measuring device that is being operated, the API provides the application program with flow control data of the number of times that the function must be called.

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27. Computer-executable process steps to provide an application programming interface (API), the API providing a common interface between an

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to be displayed so as to instruct the user in positioning any of the color measuring sensors; and a make-measurement function to make a color measurement of the patch at which any of the color measuring sensors is relatively positioned, the make-measurement function providing the application program with a color measurement value for the color patch, providing the application program with a call-again value in a case that the make-measurement function needs to be called multiple times to complete making the color measurement of the color patch and has not yet been called the multiple times, and providing the application program with a measurement display value that is to be displayed so as to instruct the user in making the color measurement.

28. Computer-executable process steps according to Claim 27, further comprising a get-device-capabilities function to provide the application program with a number of times that the calibrate-position function needs to be called so as to calibrate the relative position of the recording medium and to provide the application program with a number of times that the calibrate-sensor function needs to be called so as to calibrate any of the color measuring sensors.

29. Computer-executable process steps according to Claim 27, wherein the calibrate-position function further provides the application program with a number of times that the calibrate-position function needs to be called so as to calibrate the relative position of the recording medium.



30. Computer-executable process steps according to Claim 27, wherein the calibrate-position function further provides the application program with a call-again value in a case that the calibrate-position function needs to be called multiple times so as to calibrate the relative position of the recording medium and has not yet been called the multiple times.

31. Computer-executable process steps according to Claim 27, wherein the calibrate-sensor function further provides the application program with a number of times that the calibrate-sensor function needs to be called so as to calibrate any of the color measuring sensors.

32. Computer-executable process steps according to Claim 27, wherein the calibrate-sensor function further provides the application program with a call-again value in a case that the calibrate-sensor function needs to be called multiple times so as to calibrate any of the color measuring sensors and has not yet been called the multiple times.

33. Computer-executable process steps according to Claim 27, wherein the move-to-patch function causes the color measuring device to move the sensor so as to relatively position any of the color measuring sensors and the color patch.

34. Computer-executable process steps according to Claim 27, wherein the move-to-patch display value instructs the user to manipulate any of the color measuring devices so as to relatively position any of the color measuring sensors and the color patch.

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41. Computer-executable process steps according to Claim 27, wherein the plural different types of color measuring devices include XY tables and hand-held patch readers.

42. Computer-executable process steps according to Claim 27, wherein the plural different types of color measuring devices include spectrometers and densitometers.

43. Computer-executable process steps according to Claim 27, wherein the application program is a color calibration program.

44. A dynamically linkable library (DLL) for making color measurements with any of plural different types of color measuring devices each having at least one color measuring sensor, the DLL comprising plural functions each of which is for operating any of the plural different types of color measuring devices, the plural functions comprising:

a calibrate-position function to calibrate a relative position of a recording medium with respect to any of the plural different types of color measuring devices;

a calibrate-sensor function to calibrate any of the color measuring sensors of any of the plural different types of color measuring devices;

a move-to-patch function to relatively position any of the color measuring sensors and a color patch for any of the plural different types of color measuring devices, the move-to-patch function being provided with a logical color patch number; and

a make-measurement function to make a color measurement of the patch at which any of the color measuring sensors is relatively positioned, the

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wherein in order to complete an operation performed by at least one of the plural functions, the function that performs the operation must be called a number of times which is different for at least two different types of color measuring devices, and wherein for a color measuring device that is being operated, the DLL provides flow control data of the number of times that the function must be called.

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20      code to generate print data for the color
      patches;
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25                   code to make color measurements of the  
color patches printed on the recording medium using  
any of plural different types of color measuring  
devices, the code to make color measurements calling  
functions provided by an application programming  
30 interface (API) that provides a common interface to  
the plural different types of color measuring  
devices, the code to make color measurements using  
the common interface; and

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50. A computer-readable medium according to Claim 46, wherein the flow control data is provided by a separate function other than the

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a make-measurement function to make a color measurement of the patch at which any of the color measuring sensors is relatively positioned, the make-measurement function providing the application program with a color measurement value for the color patch.

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59. A computer-readable medium according to Claim 53, wherein the move-to-patch function provides the application program with at least one display value that is to be displayed so as to instruct the user to move the recording medium so as to relatively position any of the color measuring sensors and the color patch.

60. A computer-readable medium according to Claim 53, wherein the move-to-patch function provides the application program with a recalibrate value in a case that the relative position of the recording medium needs to be recalibrated.

61. A computer readable medium according to Claim 53, wherein the make-measurement function provides the application program with at least one display value that is to be displayed so as to instruct the user in making the color measurement.

62. A computer-readable medium according to Claim 53, wherein the make-measurement function further provides the application program with a recalibrate value in a case that any of the color measuring sensors needs to be recalibrated.

63. A computer readable medium according to Claim 53, wherein the flow control data is provided by the function which must be called the number of times in order to complete the operation.

64. A computer readable medium according to Claim 63, wherein the flow control data is provided in the form of a call-again value.

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72. A computer-readable medium storing computer-executable process steps, the computer-executable process steps to provide an application programming interface (API), the API providing a

common interface between an application program and plural different types of color measuring devices each having at least one color measuring sensor, the computer-executable process steps comprising plural functions for operating any of the plural different types of color measuring devices, the plural functions comprising:

a calibrate-position function to calibrate a relative position of a recording medium with respect to any of the plural different types of color measuring devices, the calibrate-position function providing the application program with a position-calibration display value that is to be displayed so as to instruct a user to position the recording medium or to position any of the color measuring sensors;

a calibrate-sensor function to calibrate any of the color measuring sensors of any of the plural different types of color measuring devices, the calibrate-sensor function providing the application program with a sensor-calibration display value to the application program, the sensor-calibration display value to be displayed so as to instruct the user in calibrating any of the color measuring sensors;

a move-to-patch function to relatively position any of the color measuring sensors and a color patch for any of the plural different types of color measuring devices, the move-to-patch function being provided with a logical color patch number by the application program, providing the application program with a call-again value in a case that the move-to-patch function needs to be called multiple times to complete the relative positioning of the color measuring sensors and has not yet been called the multiple times, and providing the application program with a move-to-patch display value that is

to be displayed so as to instruct the user in  
positioning any of the color measuring sensors; and  
a make-measurement function to make a color  
measurement of the patch at which any of the color  
measuring sensors is relatively positioned, the  
make-measurement function providing the application  
program with a color measurement value for the color  
patch, providing the application program with a  
call-again value in a case that the make-measurement  
function needs to be called multiple times to  
complete making the color measurement of the color  
patch and has not yet been called the multiple  
times, and providing the application program with a  
measurement display value that is to be displayed so  
as to instruct the user in making the color  
measurement.

73. A computer-readable medium according  
to Claim 72, further comprising a get-device-  
capabilities function to provide the application  
program with a number of times that the calibrate-  
position function needs to be called so as to  
calibrate the relative position of the recording  
medium and to provide the application program with a  
number of times that the calibrate-sensor function  
needs to be called so as to calibrate any of the  
color measuring sensors.

74. A computer-readable medium according  
to Claim 72, wherein the calibrate-position function  
further provides the application program with a  
number of times that the calibrate-position function  
needs to be called so as to calibrate the relative  
position of the recording medium.

75. A computer-readable medium according  
to Claim 72, wherein the calibrate-position function

further provides the application program with a call-again value in a case that the calibrate-position function needs to be called multiple times so as to calibrate the relative position of the recording medium and has not yet been called the multiple times.

76. A computer-readable medium according to Claim 72, wherein the calibrate-sensor function further provides the application program with a number of times that the calibrate-sensor function needs to be called so as to calibrate any of the color measuring sensors.

77. A computer-readable medium according to Claim 72, wherein the calibrate-sensor function further provides the application program with a call-again value in a case that the calibrate-sensor function needs to be called multiple times so as to calibrate any of the color measuring sensors and has not yet been called the multiple times.

78. A computer-readable medium according to Claim 72, wherein the move-to-patch function causes the color measuring device to move the sensor so as to relatively position any of the color measuring sensors and the color patch.

79. A computer-readable medium according to Claim 72, wherein the move-to-patch display value instructs the user to manipulate any of the color measuring devices so as to relatively position any of the color measuring sensors and the color patch.

80. A computer-readable medium according to Claim 72, wherein the move-to-patch function causes any of the color measuring devices to

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88. A computer-readable medium according to Claim 72, wherein the application program is a color calibration program.

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89. A computer-readable medium storing a dynamically linkable library (DLL), the DLL for making color measurements with any of plural different types of color measuring devices each having at least one color measuring sensor, the DLL comprising plural functions each of which is for operating any of the plural different types of color measuring devices, the plural functions comprising:

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a calibrate-position function to calibrate a relative position of a recording medium with respect to any of the plural different types of color measuring devices;

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a calibrate-sensor function to calibrate any of the color measuring sensors of any of the plural different types of color measuring devices;

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a move-to-patch/function to relatively position any of the color measuring sensors and a color patch for any of the plural different types of color measuring devices, the move-to-patch function being provided with a logical color patch number; and

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a make-measurement function to make a color measurement of the patch at which any of the color measuring sensors is relatively positioned, the make-measurement function providing a color measurement value for the color patch;

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wherein in order to complete an operation performed by at least one of the plural functions,

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